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ABSTRACT

This Job Function Booklet (Working with Numbers and Symbols) is one of the 14 components (see note) of the Career Alert Planning (CAP) program, a set of individualized materials designed to help participants find out about themselves and about the kind of work for which they are suited. In this program, participants become acquainted with occupations that are representative of 10 basic job functions. They learn how these occupations relate to personal interests, abilities, skills, educational goals, experiences, and training. They consider the working conditions, salary, and employment outlook for each occupation. Finally, participants use this information to make decisions and plans about the careers they will pursue. This Job Function Booklet examines occupations involving working with numbers and symbols, one of the 10 basic job functions explored in the series, and describes four occupations related to this function: medical laboratory assistant, computer programmer, bank teller, and library assistant. The booklet contains the following sections: (1) an "explore" section, which describes the working with numbers and symbols job function and introduces the four occupations representative of it; (2) four "perform" sections, which contain work simulation activities related to each of the four occupations (e.g., "imagine you are a library assistant; your task is to help catalog new books for your library"); these activities give participants "hands-on" experience in performing work-related tasks; and (3) four "decide" sections, which provide greater detail about the occupations and about working conditions, income, and education and experience required. Education and experience activities that can be undertaken by participants are suggested. (KC)

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TABLE OF CONTENTS

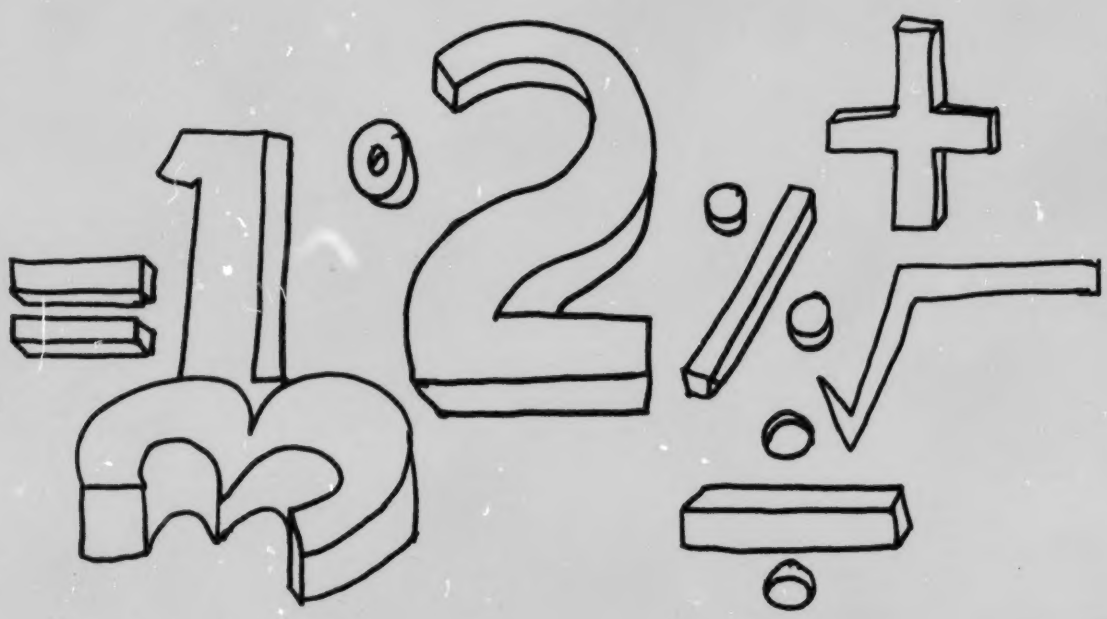
	Page
EXPLORE	1
Medical Laboratory Assistant	
PERFORM 37	13
DECIDE 37	25
Computer Programmer	
PERFORM 38	37
DECIDE 38	45
Bank Teller	
PERFORM 39	55
DECIDE 39	65
Library Assistant	
PERFORM 40	73
DECIDE 40	83

What is working with numbers and symbols?

EXPLORE

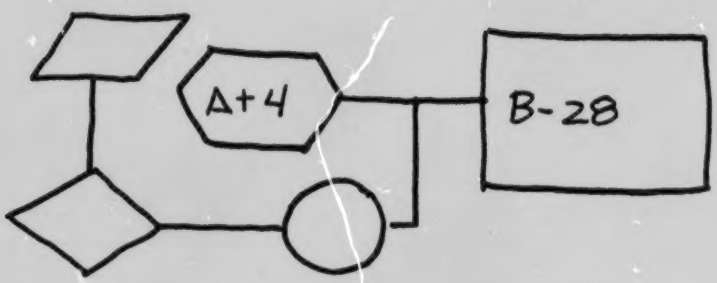
Working with numbers and symbols means using numbers or symbols to tell about something. The numbers and symbols stand for words or groups of words. They are like a special language.

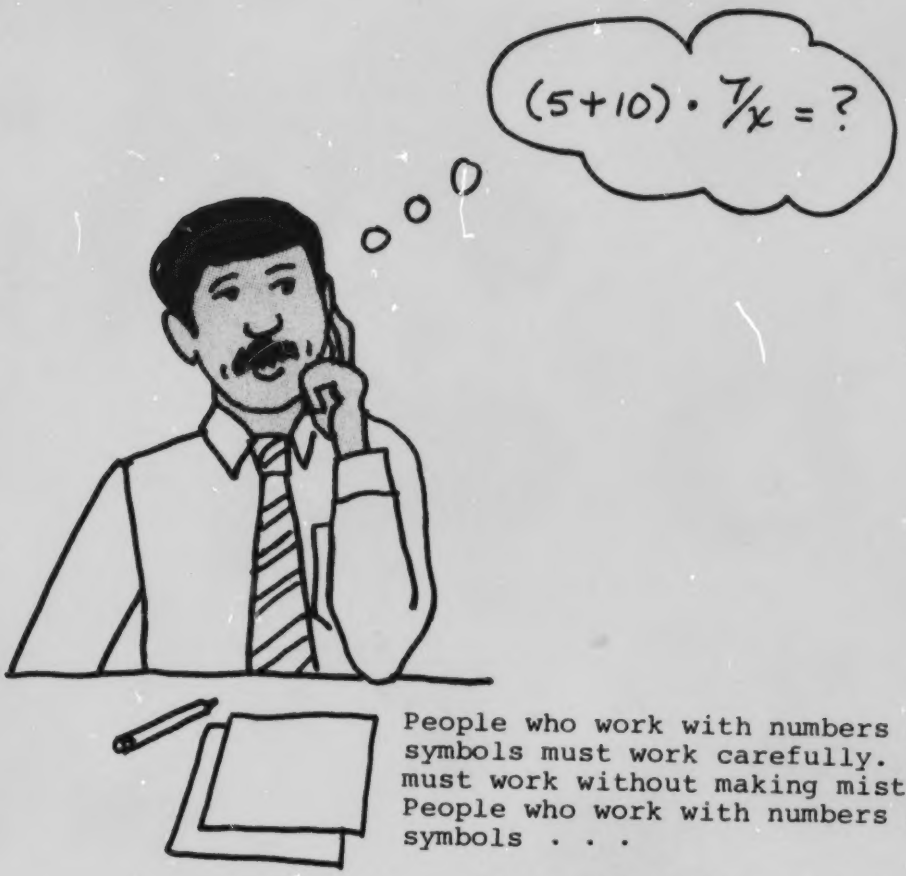
For example: You could use numbers to tell about how often you might find a blue-eyed person. You could say, "4 out of every 10 people have blue eyes." Or, you could use the % symbol to stand for the words "out of every 100." You could say, "40% of the people have blue eyes." This is a shorter and easier way to tell the same information.



Numbers and symbols can help you answer questions. They make it easier to solve problems. To solve some problems, you can use numbers and symbols instead of words.

Computer language uses numbers and symbols instead of words. (Computers are machines that solve problems.) Sometimes you can tell about a problem in a computer language. Then computers can solve the problem for you quickly.





People who work with numbers and symbols must work carefully. They must work without making mistakes. People who work with numbers and symbols . . .

- -understand and use technical language and symbols
- -identify things that are similar
- -compute and record numbers correctly
- -keep records of transactions
- -use eyes, hands, and fingers to operate delicate and sensitive instruments, machines, and equipment

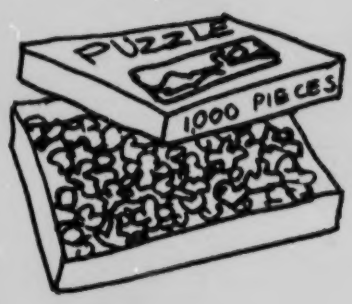
People who work with numbers and symbols spend much of their time working with paper and pencil. They usually work at desks or work stations. However, people who work with numbers and symbols do have some business contact with people. They must ask people to give them the information they need to solve problems. Success in these jobs requires certain work maturity skills. Workers must . . .

-present a clean, neat appearance
-speak and write clearly
-use good grammar
-be pleasant and friendly
-keep information confidential

Interests

People who work with numbers and symbols share many common interests. They enjoy . . .

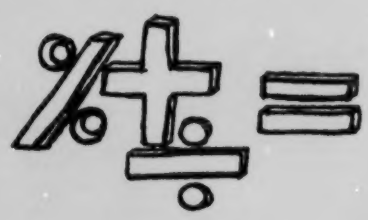
- -working math problems
- -working with paper and pencil
- -putting puzzles together
- -sorting things into categories
- -paying attention to details
- -learning the meanings of certain symbols



Abilities

People who work with numbers and symbols have the same kinds of abilities. They use their abilities to develop skills--skills that enable them to do a good job. To develop their job skills, people who work with numbers and symbols must have the ability to . . .

- -recognize differences in similar items
- -add, subtract, multiply, and divide
- -count items correctly
- -do things in the same order each time
- -work on one problem for a long time if necessary
- -explain ideas clearly so others can understand



Do you feel you have some of the interests and abilities of a person who works with numbers and symbols? Turn to the Working with Numbers and Symbols Reaction Form in your Program Guide. Place a check in front of the interests and abilities you share with people who work with numbers and symbols.

In the next pages, you will meet four people. These people have jobs working with numbers and symbols. Read about these people. Picture yourself in their jobs, because . . .

Perhaps you would like a career in working with numbers and symbols.

Bob Walker
medical laboratory assistant

I help sick people. I do tests on them. Then I study the tests and record what I find. My tests help doctors find out why people are sick.

Sometimes I must work very quickly. But I must always work very carefully. My mistakes could hurt someone!

Sally White
computer programmer

My work is like solving puzzles. I think about a problem. I try to find a simple and logical way to solve it. Then I write a program. That means I write each step of the solution in a special language for the computer. The computer uses my program to solve the problem.

Carl Ming
bank teller

As a teller, I do many different jobs each day. I must be very careful with each job. Mistakes always cost someone money! I help my customers with their banking needs. I handle deposits and withdrawals for bank accounts. I cash checks.

After the bank closes, I check all my work to find any mistakes. None of the tellers can go home until all our mistakes are corrected!

Pat Andres
library assistant

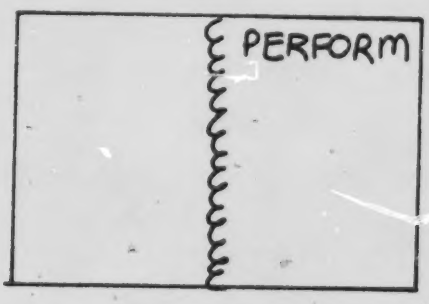
I do many different things at the library. Sometimes I put books on shelves. Sometimes I repair damanged books. I also write catalog cards for new books that the library gets. My job is very interesting because I do so many things.

Would you like to try out some jobs that these workers do?

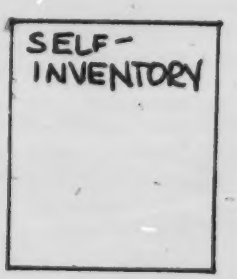
yes ▶ Choose one of these occupations:

Occupation 37--Medical Laboratory Assistant
Occupation 38--Computer Programmer
Occupation 39--Bank Teller
Occupation 40--Library Assistant

Then, turn to the proper PERFORM section of this Job Function booklet.



no ▶ Check your Self-Inventory Chart. Choose your next highest ranking job function. Get that Job Function booklet and read the EXPLORE section.



Medical Laboratory Assistant PERFORM 37

You know that doctors work to find out why people are sick and how to make people well. But, doctors receive help from workers in many other medical occupations. A medical laboratory assistant is one of these workers.

Medical laboratory assistants help doctors by performing responsibilities like the following:

Responsibilities

1. Study body substances.
2. Store and label plasma.
3. Clean and sterilize laboratory equipment, glassware, and so forth.
4. Prepare solutions for lab tests.
5. Keep records of lab tests.

You will learn one way to study body substances as you PERFORM the following activity.

When a person is sick, the body substances (skin, blood, urine) often show signs of the illness. So, doctors order certain tests that require samples of the substances. Medical laboratory assistants study these samples.

This is how medical laboratory assistants study samples:

1. They look at the samples under a microscope. (A microscope is an instrument that makes the samples look larger.)

2. They do tests on the samples.

3. They use the test results to tell if anything is wrong with the person.

Medical laboratory assistants often study blood samples. They know they must learn about the cells in blood. Blood samples have three types of cells in them. Cells are the very tiny parts in all living things. Cells can be seen only with a microscope.

In school a medical laboratory assistant learns . . .

-the cell types

-how to identify each cell type (to look at the cell under a microscope and know which type it is)

-the number of each type of cell in a normal blood sample

Imagine . . .

YOU are a medical laboratory assistant.

A doctor has asked you to look at a blood sample from one of his patients. He wants you to identify the cells in the blood sample and to count them. This is called a blood count.

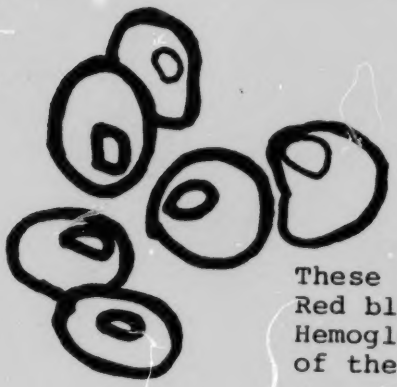
Your task is to do a blood count.

This is what you must do:

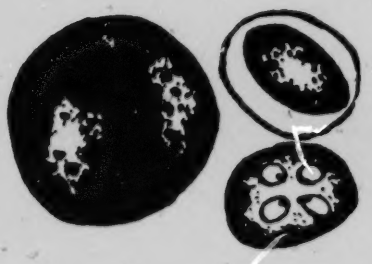
Identify the kinds of cells found in a blood sample

STEP 1.

Read the information given below.



These are RED BLOOD CELLS.
Red blood cells contain hemoglobin. Hemoglobin carries air to all parts of the body.



These are WHITE BLOOD CELLS.
White blood cells fight diseases in the body. All white blood cells do not look exactly alike.

These are PLATELETS.
Platelets are pieces of cell. The pieces stick together, or clot. They help cuts or other injuries to heal.

STEP 2.

Match the kinds of cells to their definitions.

a. Turn to Worksheet 37, Medical Laboratory Assistant.

b. Answer the questions on pages 1 and 2. If you need help, ask your teacher.

c. Check your work.

d. If you have accurately completed the worksheet, turn to the next page. If not, study the cell information again. Try to answer the questions correctly.

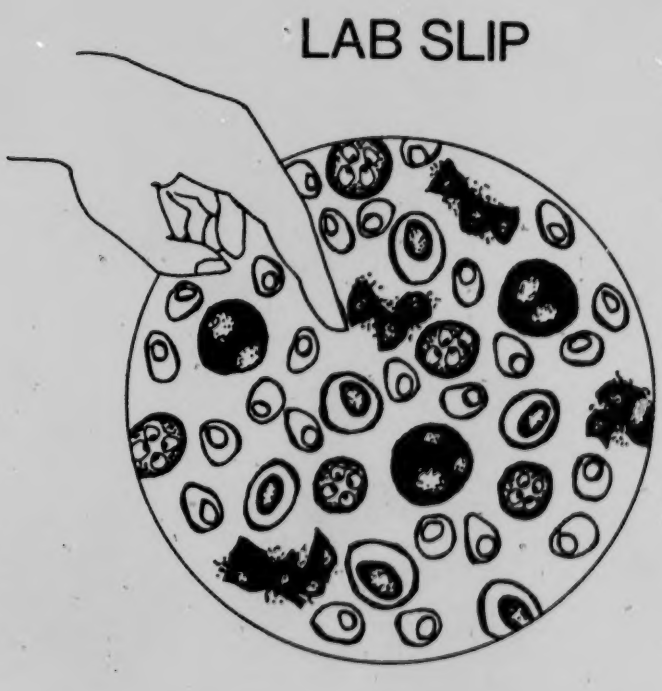
Count the number of each kind of cell

STEP 1.

Practice counting cells by completing page 3 of Worksheet 37, Medical Laboratory Assistant.

STEP 2.

Now, look at the blood sample. See the drawing on Worksheet 37, Medical Laboratory Assistant (page 4 of 4). This is what you would see under a microscope.



BLOOD SAMPLE

STEP 3.

Count the red blood cells in the sample. Write the number on your lab slip.

STEP 4.

Now count the number of white blood cells. Write this number on your lab slip.

STEP 5.

Count and record the number of platelets.

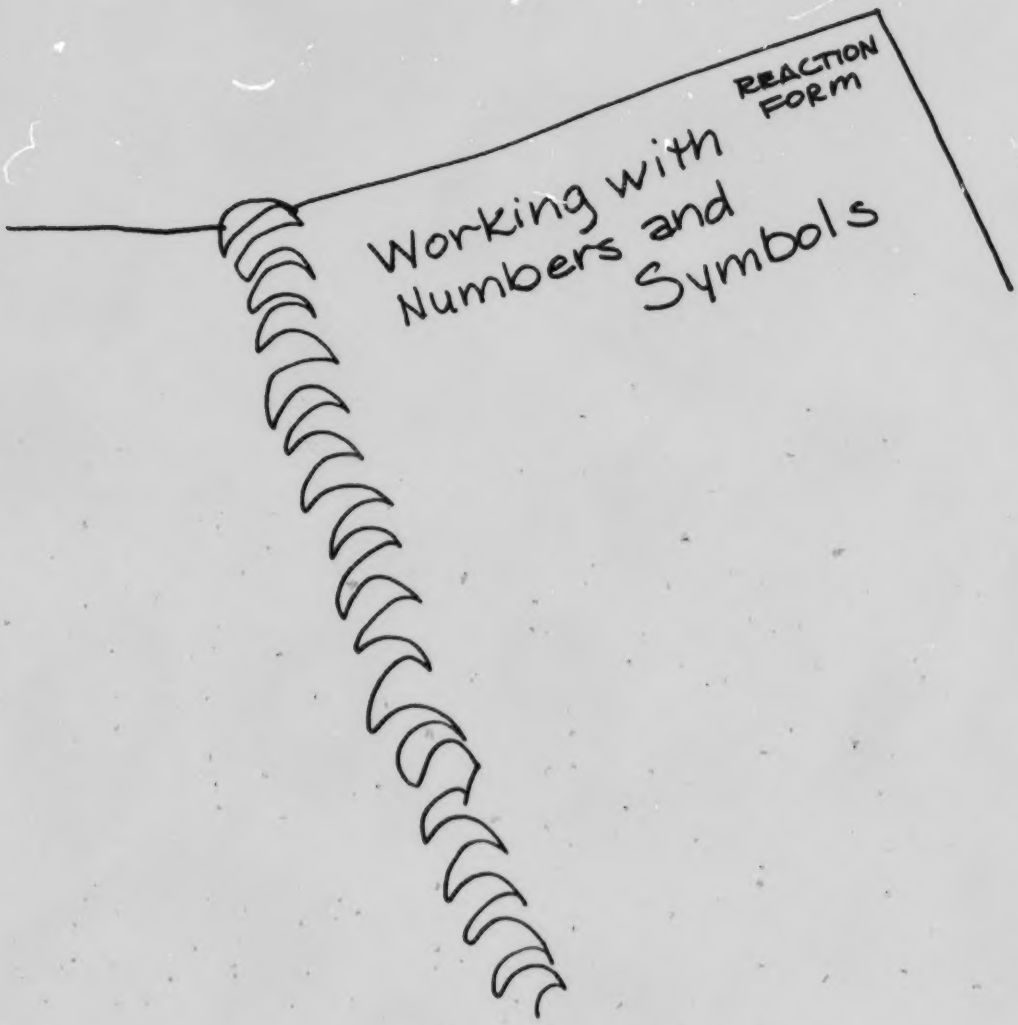
STEP 6.

Check your answers with the key below.

red blood cells 25
white blood cells 14
platelets 4

Now . . .

Turn to the Working with Numbers and Symbols Reaction Form in your Program Guide. Find the Medical Laboratory Assistant page. Record your feelings about your interests and abilities in this activity.



Did you like being a medical laboratory assistant? Yes? Then here are

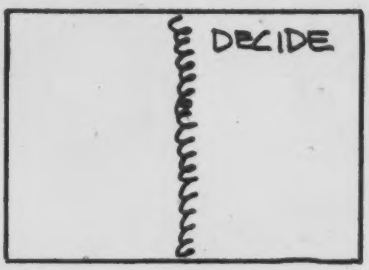
Some other activities:

1. Ask the science teacher at your school to let you look at some samples through a microscope.

2. Visit a medical laboratory. Ask if you may watch as the tests are studied. Talk to the laboratory assistant about the work.

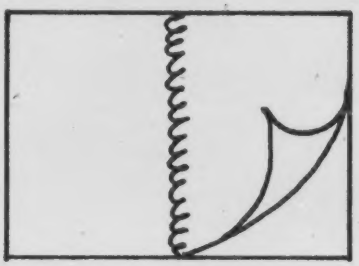
Would you like to find out more about this occupation?

yes ▶ Read DECIDE 37--Medical Laboratory Assistant

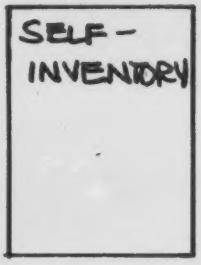


no ▶ Turn to another Working with Numbers and Symbols occupation:

Occupation 38--Computer Programmer
Occupation 39--Bank Teller
Occupation 40--Library Assistant



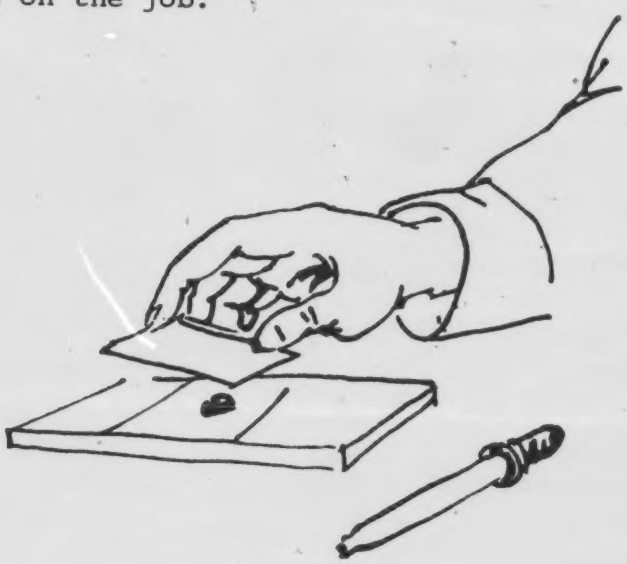
or ▶ Look at the Self-Inventory Chart in your CAP Program Guide. Select another job function to investigate.



Medical Laboratory Assistant DECIDE 37

You have just done one of the many tasks a medical laboratory assistant does. You counted the different types of cells in a blood sample. (You used a drawing of a blood sample in place of a real blood sample.)

You looked at things very carefully. You had to know the different kinds of blood cells. You counted the cells very carefully so you did not lose count. The skills you used are the same skills that medical laboratory assistants use on the job.



Do you want to know more about a medical laboratory assistant's job? The following pages will tell you more facts. These facts will help you DECIDE if you would like a career as a medical laboratory assistant.

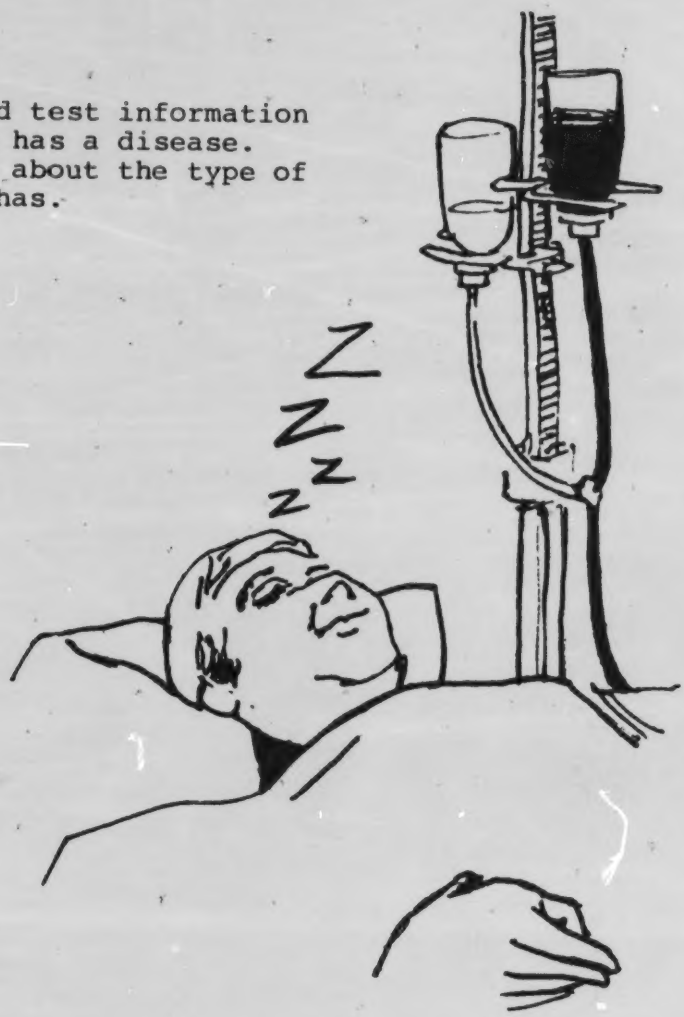
Talking with Bob Walker, medical laboratory assistant at Voss Laboratory . . .

I spend most of my workday making slides (small pieces of glass) with samples of blood on them. I look at them through a microscope. My job is to look at and test blood, urine, and skin.

Dr. Miller sends me a blood sample. I put some blood on a slide and cover the blood with a small piece of plastic.

I look at the blood sample through the microscope. I learn all I can about the blood. I write a careful record of what I learn. The doctor will use the information about the blood.

Sometimes the blood test information tells if a patient has a disease. Sometimes it tells about the type of blood the patient has.



Often I "type" blood for people who need more blood. This means that I find out what kind of blood people have. There are several types of blood (A, B, AB, and O, both positive and negative). I must be very careful when I find out blood types. If people get blood that doesn't match their own, they may become sick or die.

In my work, I use needles and syringes, slides, and a microscope. I also use a centrifuge. This is a machine that spins substances to separate them into different parts.

Sometimes, I use machines that do tests automatically. One machine does twelve different tests on blood. The machine gives me a written report of the test results. These machines are a big help to me!

You can tell that my job keeps me very busy. I have to be very careful and follow instructions exactly so that I don't make mistakes. Mistakes on this job can be very dangerous! People's lives can depend upon my good work. It is very rewarding to know that I am a part of a team that is working to make and keep people well.

What do you like most about your job?

I enjoy looking at things through a microscope. It is fun to see things that people can't see with their eyes alone.

I also enjoy working with other people. I talk with medical technologists, doctors, and other lab assistants. I enjoy watching the different ways people do their jobs.

What do you like least?

It's hard to get a blood sample from some patients whose blood vessels are not healthy. I have to try again and again. This bothers me because it hurts the patients.

Some days I do the same thing over and over--like putting labels on slides. That can get boring. So, I try to remember how much patients rely on me to label their blood samples correctly. It feels good to be needed.

How did you prepare for your job?

I studied at a hospital for one year after I graduated from high school. Some junior colleges and vocational schools offer similar one-year training programs.

I learned that math skills and communication skills are very important. I use a lot of math in my work--I use it when I count blood cells. I also talk to doctors, patients, and fellow workers. I must speak well and use the right medical terms. Then everyone knows what I am saying and doing.

I have always been able to do fine or detailed work with my hands. This special ability helps me. It enables me to handle small amounts of blood and tissue on slides. Sometimes I practice my hand coordination. I do projects that require small motor control. I do things like needlework and model ship building.

Do all medical laboratory assistants do the same things that you do?

Yes, although we can work in many different places. We work in labs that are found in clinics, government health departments, doctors' offices, research centers, drug manufacturing companies, hospitals, and private medical laboratories. In each type of lab, assistants are supervised by medical technologists or doctors.

What is the employment outlook?

The employment outlook for medical laboratory assistants is good. Doctors are using tests more frequently as part of their exams. People are more conscious of their health and are requesting more tests.

New machines are also creating a demand for more medical laboratory assistants. With new machines, the assistants are able to do work that previously needed the skills of medical technologists.

Do you want to learn more about this job?

You can get more education:

- Take the following courses in high school.

  Science (Biology, Chemistry):

  You must know many things about the human body and the substances that make up the body.

  Mathematics:

  Many of the reports a medical laboratory assistant writes use mathematics to tell doctors how many substances and cells are in samples.

- Learn about some jobs related to medical laboratory assistants . . .

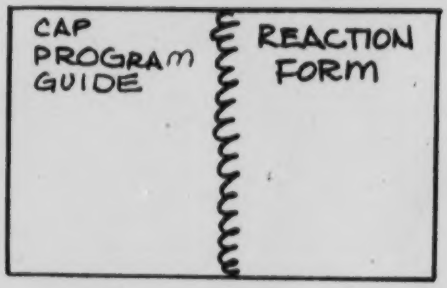
  -laboratory helper
  -nuclear medical technologist
  -medical records clerk
  -pathologist

You can get some experience:

- Visit a medical laboratory and look at the equipment. One of the assistants can show you how some of the tests are done.
- Get a job as a helper in the science or chemistry laboratory at a school. It will help you learn about laboratories.
- Attend a training program at a hospital, vocational school, or college.
- Ask about a work-study position in a medical laboratory.

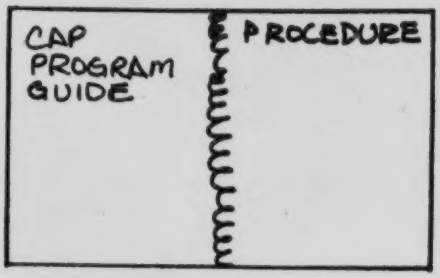
Now . . .

Turn to the Working with Numbers and Symbols Reaction Form in your Program Guide. Answer the questions on the back of the Medical Laboratory Assistant sheet.



What Next?

How many occupations have you investigated so far? Turn to the Procedure section of your Program Guide. Find the direcions that apply to you.



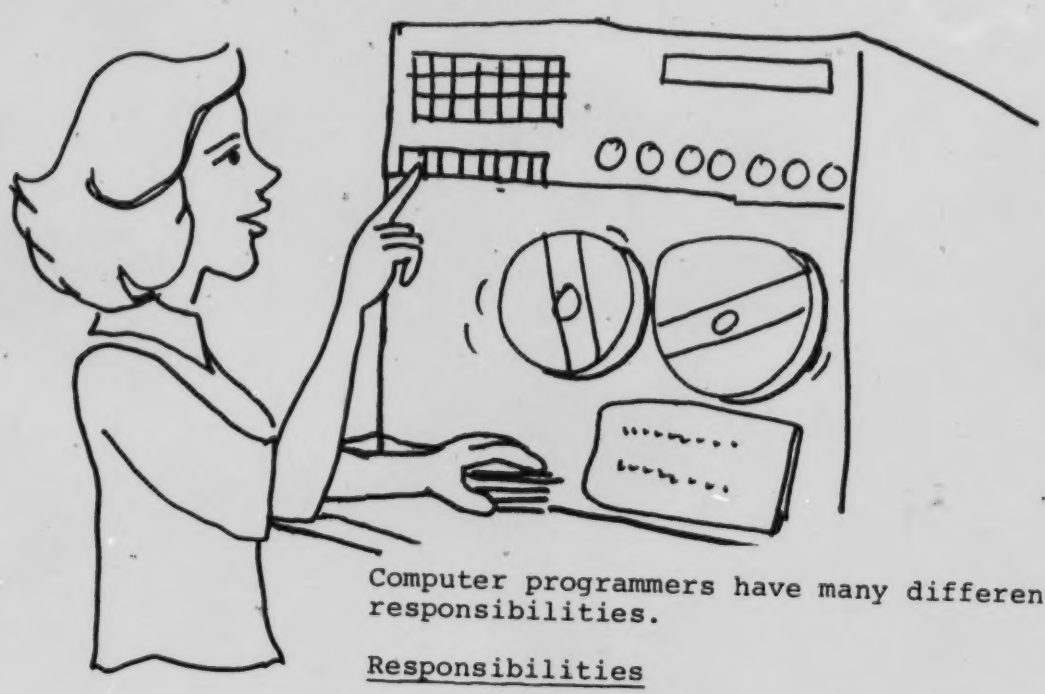
Enjoy the Career Alert Planning program!

Computer Programmer

PERFORM 38

Computer programmers solve many kinds of problems. They use computers by programming them to solve problems.

Computers don't "read" English, or even math. They "read" special computer languages. Computer programmers direct information through the computer by using these computer languages.



Computer programmers have many different responsibilities.

Responsibilities

1. Break down each problem into a series of steps.
2. Write programs (or instructions) in coded language.
3. Test operation of program to be sure instructions are correct.
4. "De-bug" (make correct) incorrect programs.
5. Retrieve data stored in other computers.

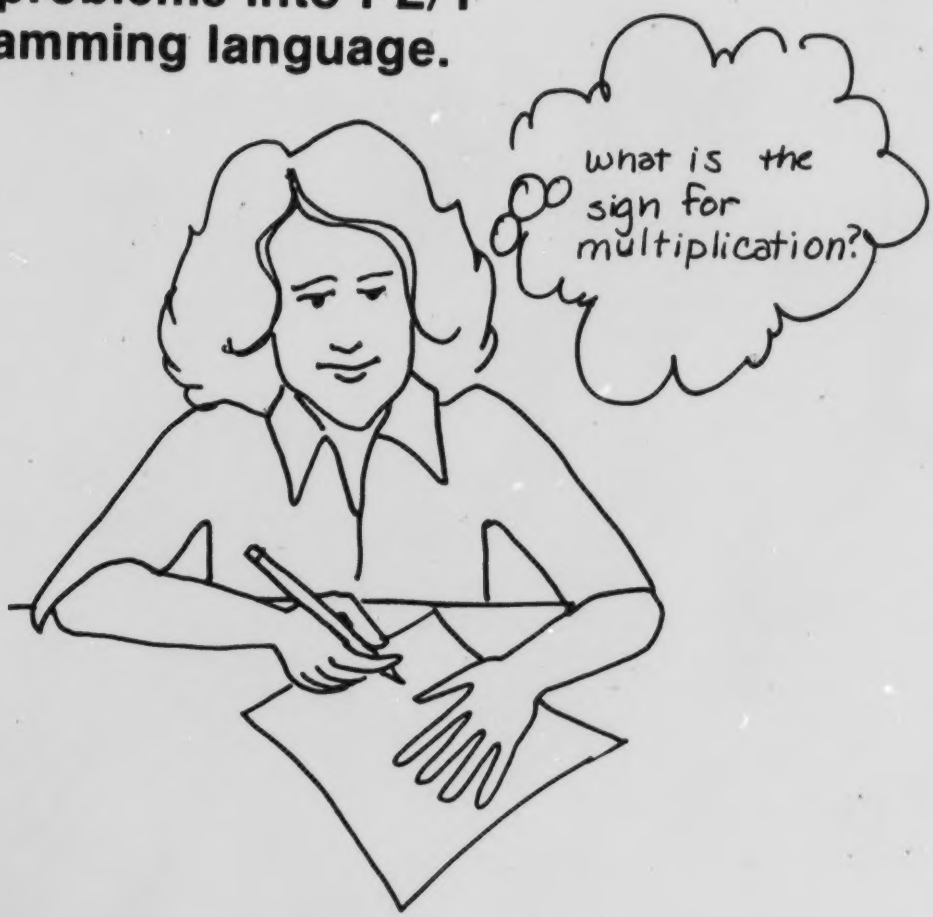
You will learn one way to write programs in coded language as you PERFORM the following activity.

Imagine . . . YOU are a computer programmer.

As a computer programmer, you must write a program to solve a problem. In the program you will direct the computer to add, subtract, multiply, divide, and find square roots.

The computer cannot read a math problem the way it is written in a math book. Your computer reads only PL/1 Programming Language. (Several other programming languages are used in other types of computers.)

Your task is to change the math problems into PL/1 programming language.



This is what you must do:

Identify PL/1 Programming Language terms

STEP 1.

Read the rules on the next page. The rules tell you how to change math problems into PL/1 Programming Language. Study the rules carefully.

STEP 2.

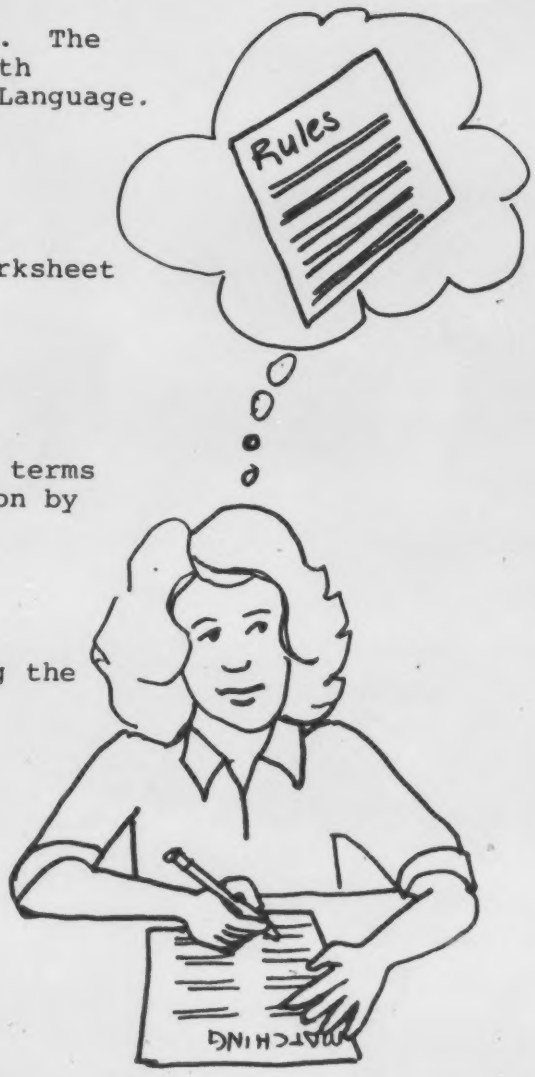
Turn to the Matching Game on Worksheet 38a, Computer Programmer.

STEP 3.

Match PL/1 Programming Language terms to the proper English translation by completing the worksheet.

STEP 4.

Check your answers by re-reading the rules on the next page.



Rules for Translation into PL/1 Programming Language

All letters become capital (upper case) when translated into PL/1. For example, a becomes A .

No spaces are placed within a formula. For example, 7 minus 5 is written 7-5, not 7 - 5.

Square root ($\sqrt{}$) is written SQRT. For example, if you want to find the square root of 9 ($\sqrt{9}$), you would write SQRT9.

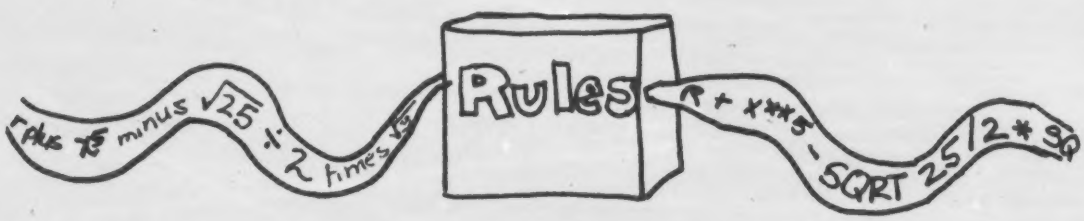
The symbol for addition is +. For example, 7 plus 5 is written 7+5.

The sign for subtraction is -. For example, 7 minus 5 is written 7-5.

The sign for multiplication is *. For example, 2 times 3 is written 2*3, not 2x3.

The sign for division is /. For example, 6 divided by 3 is written 6/3, not 6÷3 or $\frac{6}{3}$.

Raising a number to a power is written **. For example, X to the third power is written X**3, not X^3.



Write math problems in
PL/1 Programming Language

STEP 1.

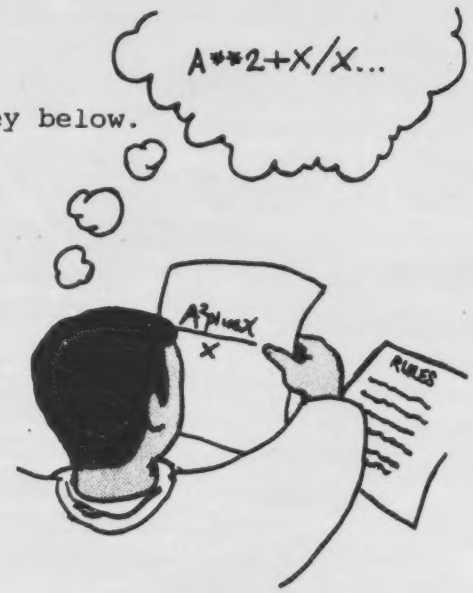
Turn to the Exercise Sheet on Worksheet 38b, Computer Programmer.

STEP 2.

Translate each problem into PL/1 computer language. Be sure to follow all the rules.

STEP 3.

Compare your answers with the key below.



Key:

1. X**4	6. 3*A-4*B/A**2
2. X**3/X**4	7. X+4/X**4
3. X**3+X**4	8. X**2/X**4
4. A**2+B**2	9. SQRTA**3
5. A**2/5	10. A**2+2*B*X

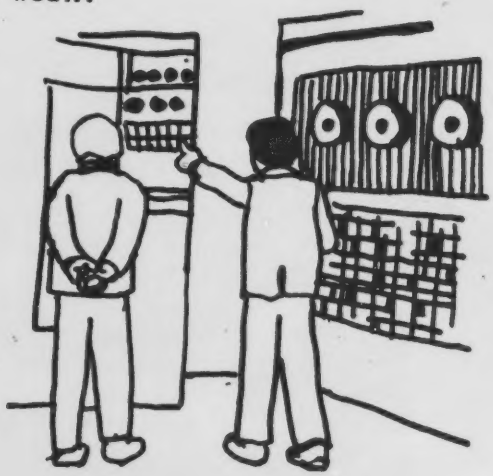
Now . . .

Turn to the Working with Numbers and Symbols Reaction Form in your Program Guide. Find the Computer Programmer page. Record your feelings about your interests and abilities in this activity. Return to this page.

Did you enjoy being a computer programmer? Yes? Then here are . . .

Some other activities:

1. Visit a computer center. Watch what the computer programmers do. Talk to them about their work.

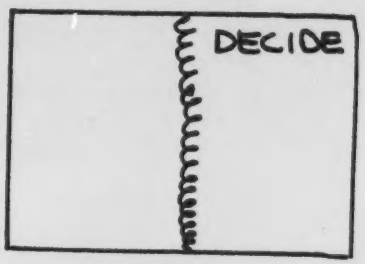


2. Find some math problems in a book. Write the problems in PL/1 computer language.

3. Find a library book that explains another computer language. Read the rules. Then, write some math problems in that language.

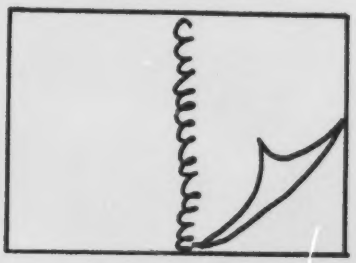
Would you like to find out more about this occupation?

yes ▶ Read DECIDE 38--Computer Programmer

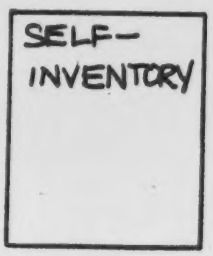


no ▶ Get another Working with Numbers and Symbols occupation:

Occupation 37--Medical Laboratory Assistant
Occupation 39--Bank Teller
Occupation 40--Library Assistant



or ▶ Look at the Self-Inventory Chart in your CAP Program Guide. Select another job function to investigate.

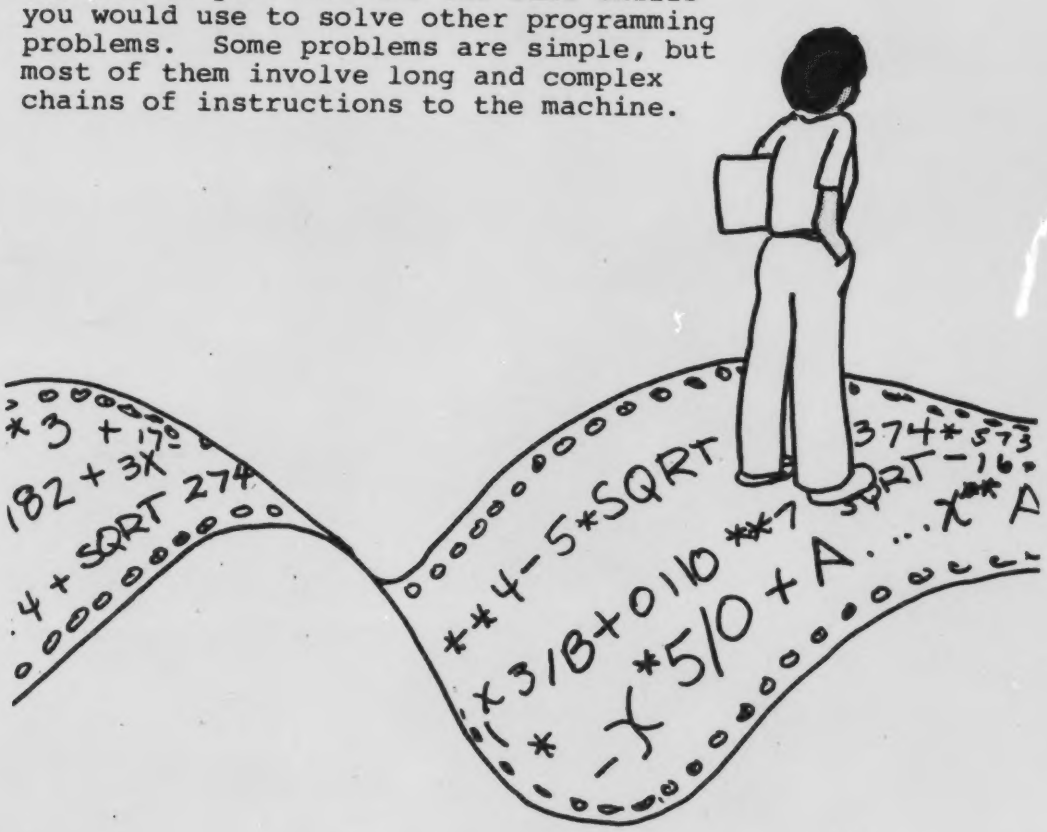


Computer Programmer

DECIDE 38

You have completed one of the tasks a computer programmer does. You translated several math problems into a computer language.

The skills you used are the same skills you would use to solve other programming problems. Some problems are simple, but most of them involve long and complex chains of instructions to the machine.

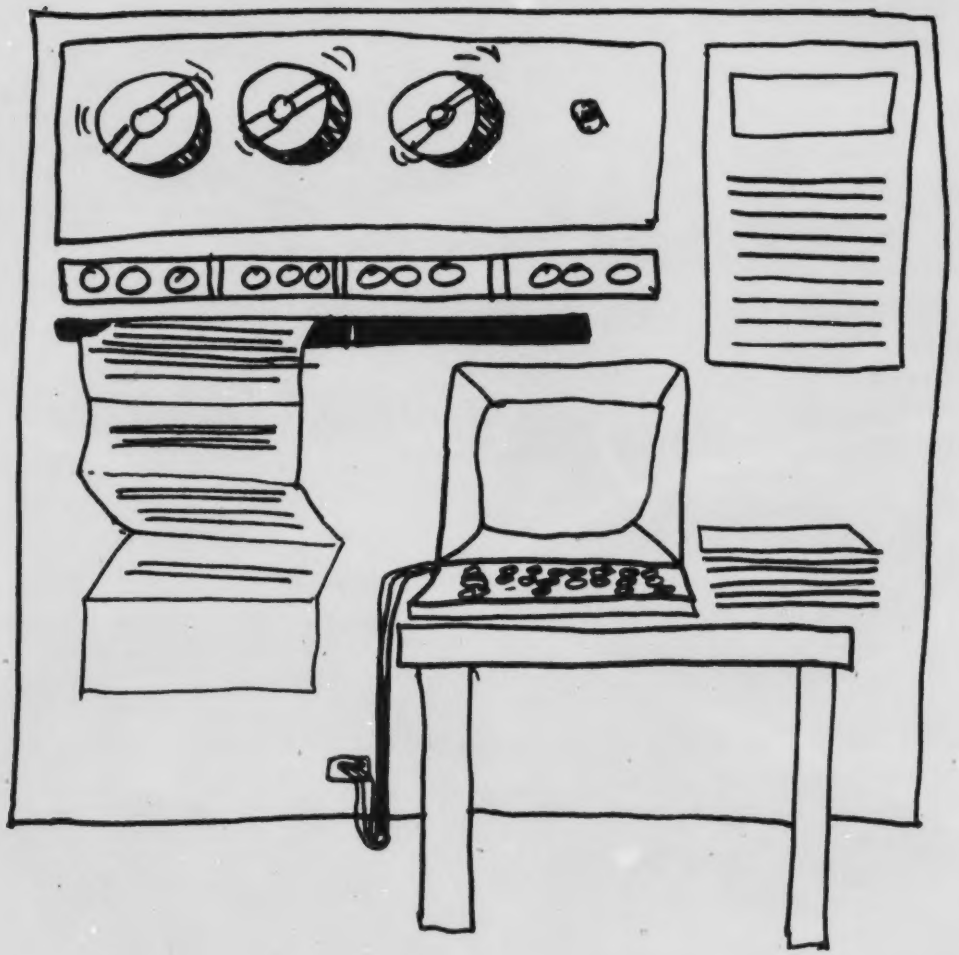


Perhaps you want to know more about a computer programmer's job. You can learn more about a career in computer programming by . . .

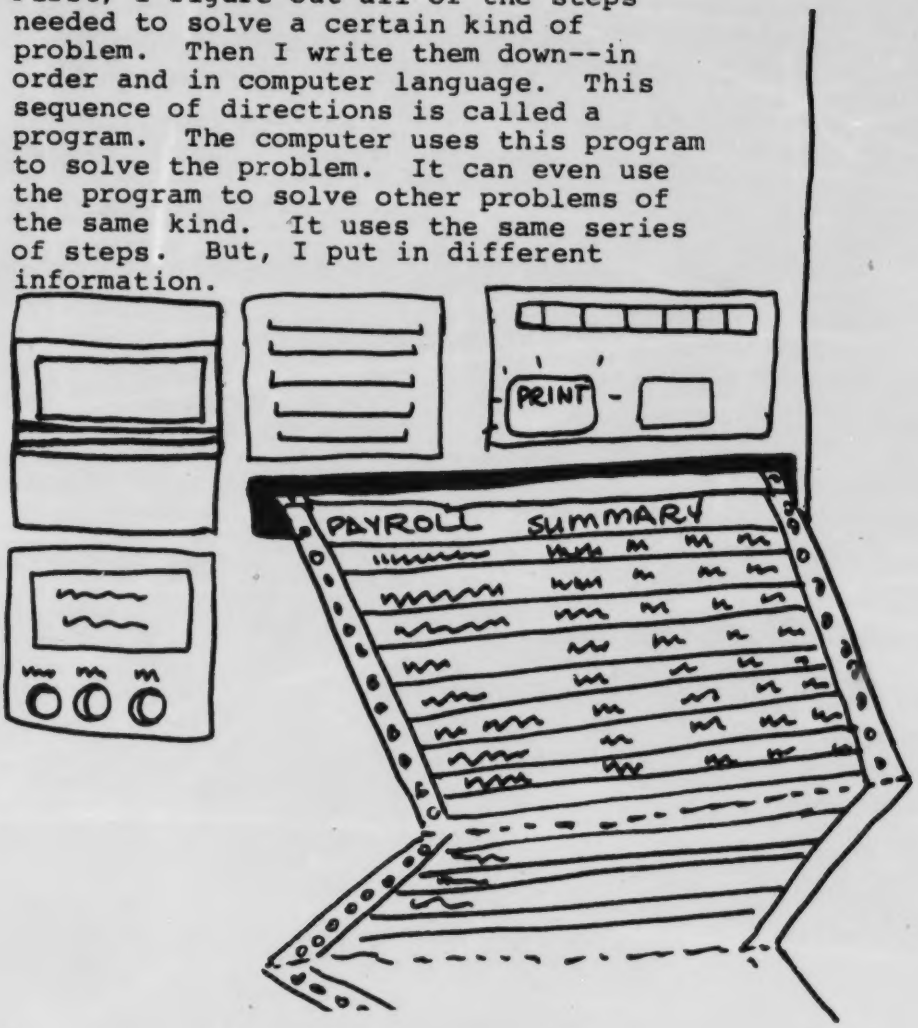
Talking with Sally White, Computer Programmer . . .

I work for the largest department store in this state. You can imagine all of the paper work involved in operating a large store. There are customer bills, employee earnings and records. There is information about what the store buys and sells. My job is to write directions (programs) for the computer. Then the computer can be used to solve problems and handle this paper work for us!

You see, the computer is a machine. It cannot think. But, it is terrific at following directions! It performs all of the mathematical steps, or processes, that I ask of it.



First, I figure out all of the steps needed to solve a certain kind of problem. Then I write them down--in order and in computer language. This sequence of directions is called a program. The computer uses this program to solve the problem. It can even use the program to solve other problems of the same kind. It uses the same series of steps. But, I put in different information.



For example:

The computer figures out the company payroll each month. I prepared a program for the payroll problem. Now, each month the computer uses that program to do the payroll even though the employees, the number of vacation days, and the amount of overtime are different each month.

As you can see, our computer does a lot of work--and so do I! I keep busy writing new programs for special problems that come up.

How did you prepare for your job?

After I graduated from high school, I went to a technical school for one year. Then I got this job. The company sent me to training classes. I learned how this company uses the computer to solve problems.

Most programmers go to college. They earn a degree in math, science, or engineering. Some day I will go to college. Then I can get a better job.

What hours do you work?

Usually I work from 8:00 a.m. to 5:00 p.m., Monday through Friday. When I have important deadlines or we have trouble with the machine, I come to work early, stay late, or work on weekends. Also, the computer is so busy that sometimes my hours depend on when the computer is free! It must finish one program before I can put in another.

What do you like most about your job?

It is very satisfying to solve a problem and see the computer printing out lots and lots of answers! Then I can see the results of my patient, careful work and logical thought.

What do you like least?

Some problems are very simple to solve. I can write programs for these in a day.

Other problems are difficult. Sometimes I work on a long program for several weeks or even months. I have to be very patient to work out each detail!

Then, after I have written the program to solve a problem, I have to try it out in the computer. Often I need to "de-bug" it. De-bugging means correcting all of the errors in the program so that it can solve the problem. De-bugging often takes a lot of time. Then I feel a lot of pressure!

Do all computer programmers do the same things that you do?

Yes, we all write programs. When we do this, we work alone. But, we do many other tasks too. And many of the tasks involve working with other people.

I talk with many workers in the store. I find out what problems they have. We decide if the computer can solve these problems.

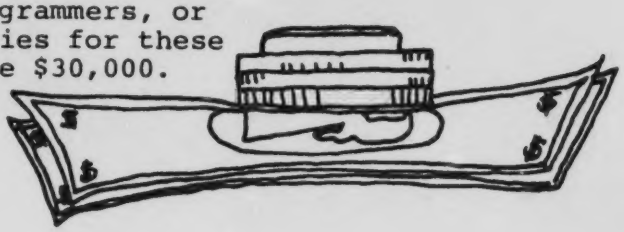
I don't operate the computer. Other workers do that job. But, I teach the computer operators how to use my program. Then, when the computer gives the answers, I explain these answers to other people. So, my job is communicating--with the computer and with other people.

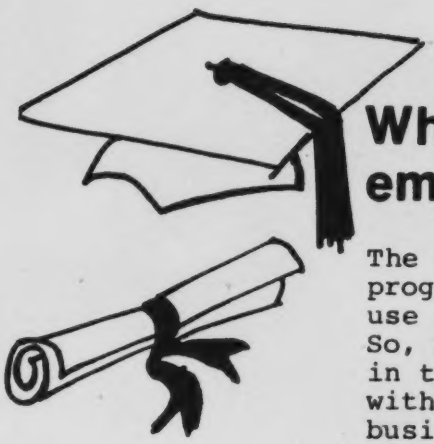
Not all programmers work for department stores. But, most programmers work for large businesses or for the government. Computer programmers are needed at insurance companies, banks, and companies that build computers. They are also needed by companies that write programs for other computer companies.

How much money do you earn?

I earn $13,500 a year. Most beginning programmers earn from $11,500-$14,500 a year. With 2-4 years experience, salary can go above $20,000. Experienced programmers can earn $24,000 or more a year, depending on education, experience, and training.

Chances for promotion are good also. Responsibilities increase as programmers are promoted to such positions as lead programmers, systems programmers, or systems analysts. Salaries for these positions are often above $30,000.





What is the employment outlook?

The employment outlook for computer programmers is excellent. Computer use is growing more rapidly each day. So, more and more workers will be needed in this field. Many jobs will be found with firms that give accounting or business management services. Research and development companies will also be seeking computer workers.

College graduates who have had computer-related courses and graduates of two-year programs in data processing technology will have the most job opportunities.

Do you want to learn more about this job?

You can get more education:

- Take the following courses in high school.

  Mathematics:

  Computer programmers use math on the job.

  Science:

  Science is often a requirement to get into computer programming courses.

- Read about computers and programming. You can borrow some books from a library.

- Explore some occupations related to computer programmer, such as . . .

  -computer systems analyst
  -computer operator
  -electronic technician
  -computer engineer

- Attend a technical school, college, or university that offers training in computer programming.

You can get some experience:

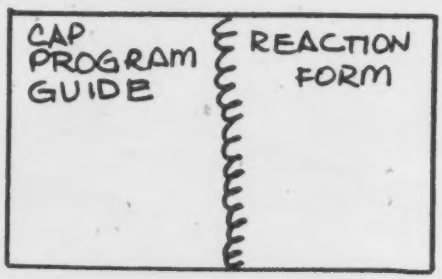
- Practice using logic. Get puzzles and riddles to solve.

- Try to arrange a visit at a computer center. Ask some programmers to show you what they do on the job.

- Apply for a part-time job working in the computer area of the business. Learn what the various computer workers do. Decide if you have interests and abilities in this work.

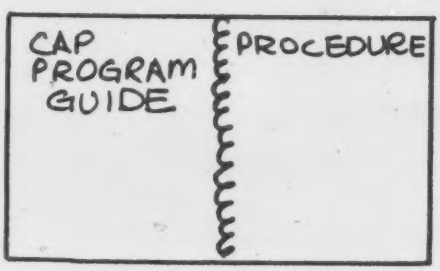
Now . . .

Turn to the Working with Numbers and Symbols Reaction Form in your Program Guide. Answer the questions on the back of the Computer Programmer sheet.



What Next?

How many occupations have you investigated so far? Turn to the Procedure section of your Program Guide. Find the directions that apply to you.



Enjoy the Career Alert Planning program!

Bank Teller

PERFORM 39

Tellers work in banks. They help customers with many of their banking needs. They have many responsibilities.

Responsibilities

1. Handle checking and savings account transactions.
2. Use machines to make change and total deposits.
3. Collect customer loan payments.
4. Sell savings bonds.
5. Sell travelers' checks.

You will learn about handling savings and checking account transactions as you PERFORM the following activity.

Imagine . . . YOU are a teller.

Each day you help customers with

-deposits to checking accounts
-deposits to savings accounts
-withdrawals from savings accounts
-interest on savings

Your task is to help customers with their banking needs.

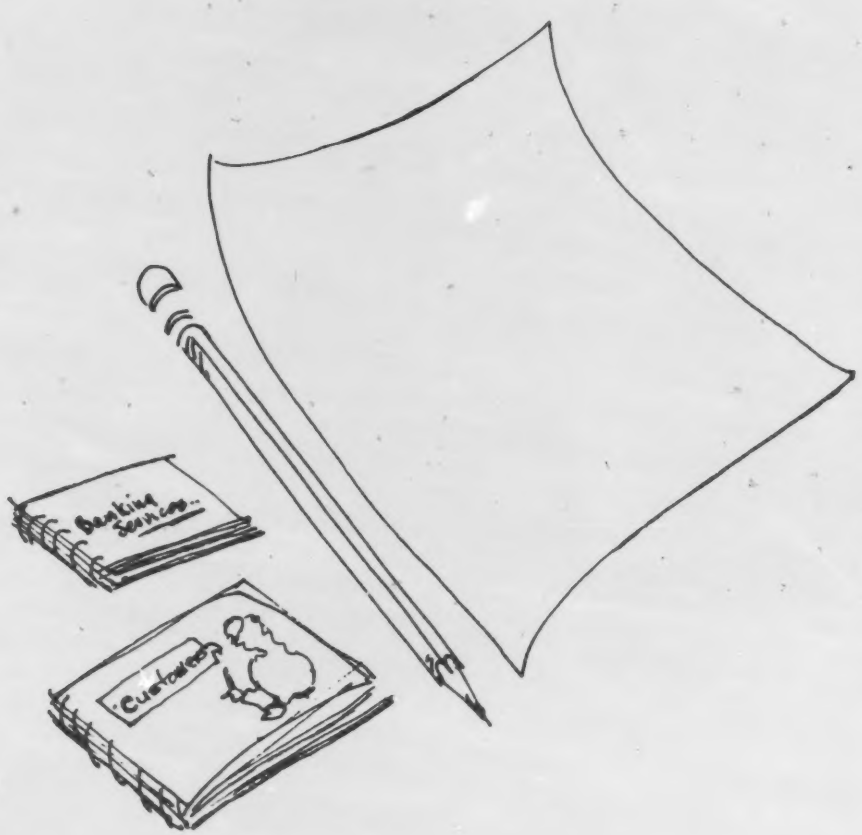
This is what you must do:

Identify banking terms

STEP 1.

Get your materials. You will need . . .

-a pencil
-a piece of paper
-the Banking Services booklet,
Bank Teller, Worksheet 39a

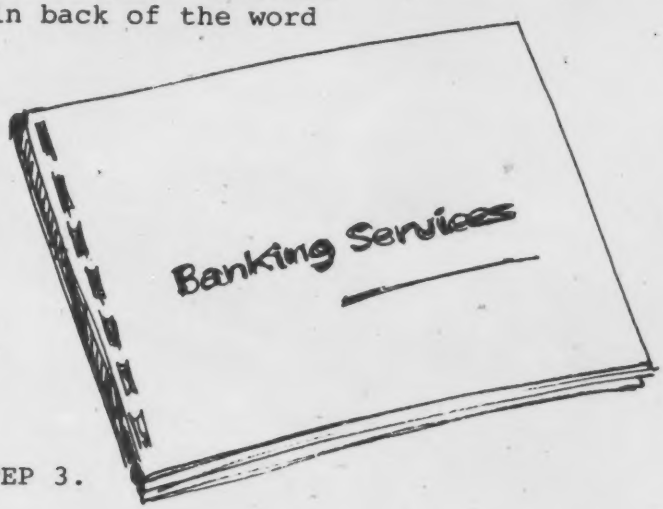


STEP 2.

Study the banking words.

a. Look at the Banking Services booklet. In this booklet you will find the information you need, such as what a "checking account" is or what "interest" means.

b. Learn about these banking words by reading the booklet. Each definition appears directly in back of the word it defines.



STEP 3.

Match the words to their definitions.

a. Get Worksheet 39b, Bank Teller.

b. Draw a line from the word to its definition.

c. Check your answers by looking through the Banking Services booklet, Worksheet 39a.

d. When your answers are correct, turn to the next page. Don't worry if you can't remember everything. You will be able to go back to the Banking Services booklet as you need it. Any word printed in capital letters is explained on a page of the Banking Services booklet.

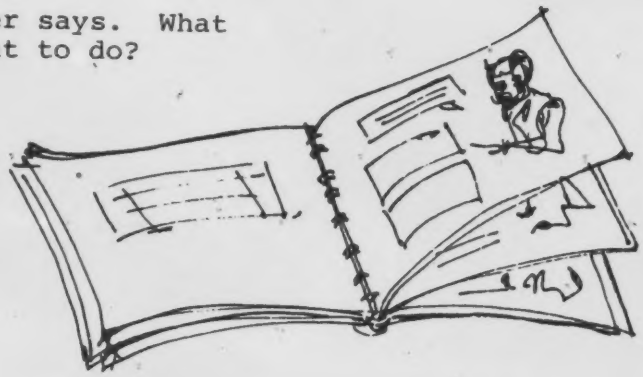
Find out your first customer's needs

STEP 1.

Get the Customers booklet for Bank Teller. Turn to Worksheet 39c.

STEP 2.

Read what the customer says. What does the customer want to do?



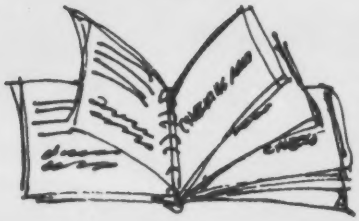
STEP 3.

Look at what the customer gives you. Is it money? Is it a booklet? Is it a check?

Identify how you can help the customer

STEP 1.

Think about what you need to do to help the customer. Go back to the Banking Services booklet if you need help. Any word printed in capital letters is in your Banking Services booklet.



STEP 2.

State what you must do. If you still need help, turn the customer page over to find a clue.

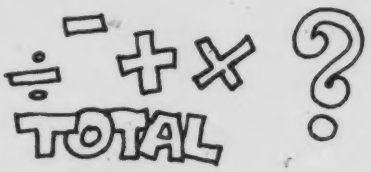
Handle the transaction

STEP 1.

Do the work. Be careful that your math is correct. People trust you with their money.

STEP 2.

Write your answer to the customer's question on your piece of paper.



Help the other customers with their banking needs

STEP 1.

Turn to the second customer on page 3 of the Customer booklet.

STEP 2.

Repeat the steps you took with the first customer to . . .

- -find out your customer's needs
- -identify how you can help the customer
- -handle the transaction

STEP 3.

Help each of the remaining customers until you have helped all nine.

STEP 4.

Check your work with the answers on the key below. Re-work problems if necessary until you get the correct answers.

Key

1. $5.23
2. $143.63
3. $72.00
4. $9.01
5. no
6. 1-$10 bill
1-$5 bill
2-$1 bills
7. $503.20
8. $153.70
9. $57.64

You have helped a lot of people with their banking needs!

Now . . .

Turn to the Working with Numbers and Symbols Reaction Form in your Program Guide. Find the Bank Teller page. Record your feelings about your interests and abilities in this activity.

Did you enjoy being a teller? Yes?
Then here are . . .

Some other activities:

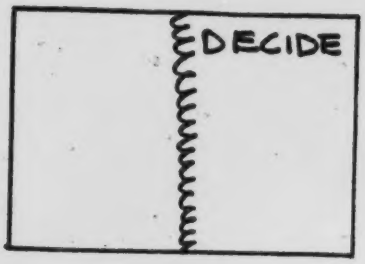
1. Visit a bank. Talk with some tellers. Watch while they help their customers.

2. A bank is different from a savings and loan association. Find out the difference.

3. Call some banks and some savings and loan associations. Ask them their interest rates on savings accounts. Who offers the higher interest rate?

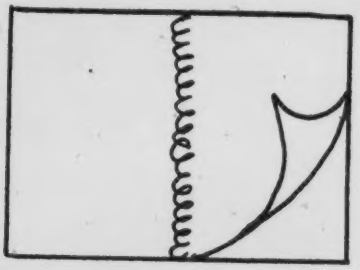
Would you like to find out more about this occupation?

yes ▶ Read DECIDE 39--Bank Teller



no ▶ Turn to another Working with Numbers and Symbols occupation:

Occupation 37--Medical Laboratory Assistant
Occupation 38--Computer Programmer
Occupation 40--Library Assistant



or ▶ Look at the Self-Inventory Chart in your CAP Program Guide. Select another job function to investigate.

Bank Teller

DECIDE 39

You just tried part of a teller's job.
You helped customers with their banking.
You used math skills to do this task.
You had to work carefully and correctly.
You also had to follow directions exactly.

Helping bank customers is only one part of a teller's job. The next few pages will tell you more. They will help you DECIDE if you would like a job as a bank teller.

65

Talking with Carl Ming, a bank teller at State Bank . . .

I begin my work an hour before the bank opens. There are many things to do to get ready for the customers. The first thing I do is get money to put in my cash drawer. I count it carefully. Then I check all the supplies I will need. When everything is just the way I want it to be, I am ready for the customers.

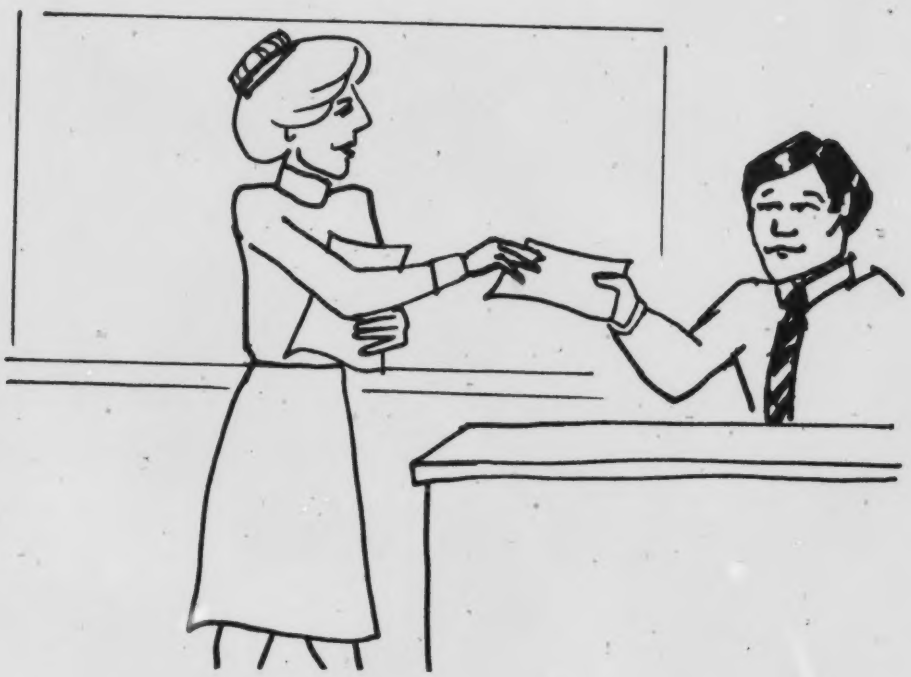
During the day I do many different things . . .

- -make deposits into checking and savings accounts
- -handle withdrawals from accounts
- -open new accounts
- -collect loan payments

When I don't have any customers, I file bank records, open mail, count cash, and do other clerical work.

66

After the bank closes, I check my daily accounts sheet. This is a sheet that tells how much money I had at the beginning and end of the day. The head teller checks all the daily accounts sheets for the entire bank.



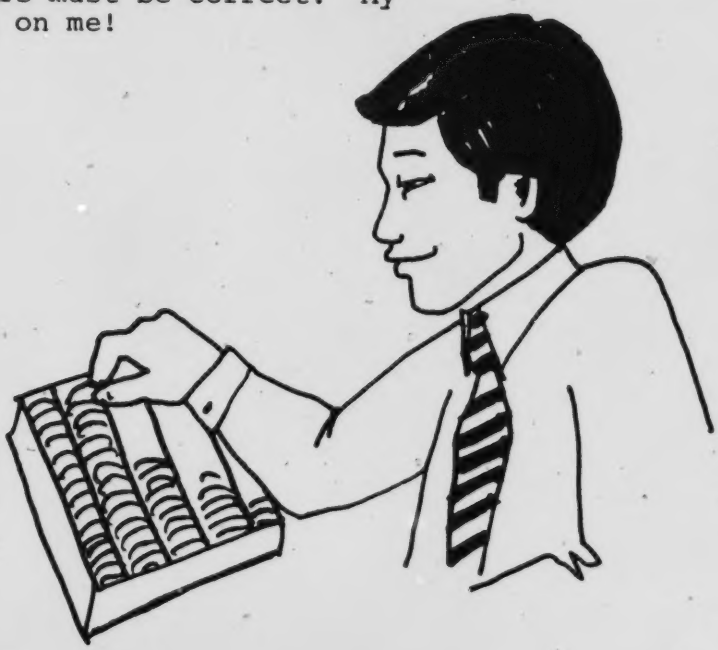
How did you prepare for your job?

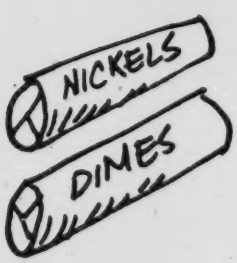
I got my first job after I graduated from high school. I attended a training program at the bank. I learned the best way to do each part of my job. I learned about the services our bank offers to its customers.

67

What do you like most about your job?

I like working with math problems. Each customer brings me a new problem. I like to see how fast I can find the answers. But, the answers must be correct. My customers rely on me!





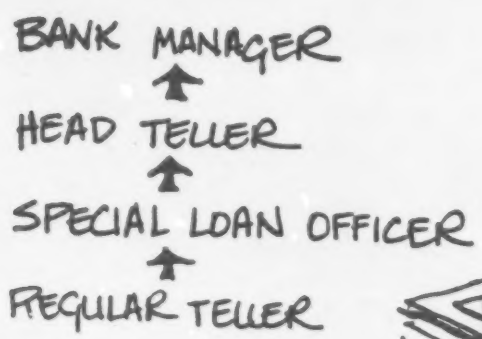
What do you like least?

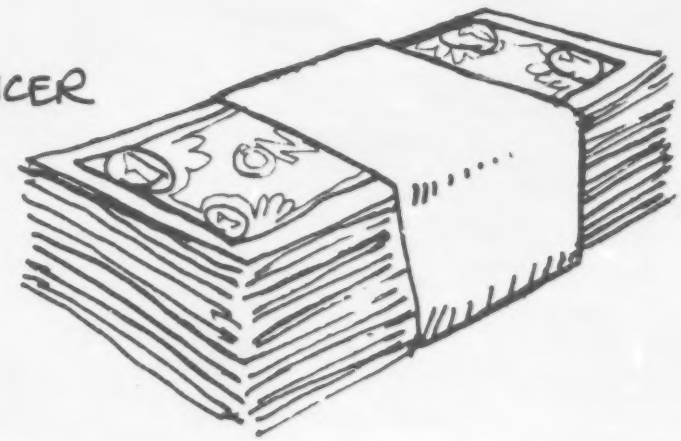
It can be very tiring when I have to stand all day. I try to do some "sitting-type" work every so often so I can rest my legs and feet. But, this doesn't always work out. I'm careful to wear comfortable shoes and that helps a lot!

Do all tellers do the same things that you do?

No, there are different kinds of tellers. Some have more responsibility than others. I started as a regular teller. Now I am a special loan teller. Soon I hope to become a head teller.

With a college education, tellers can become bank managers or "officers."



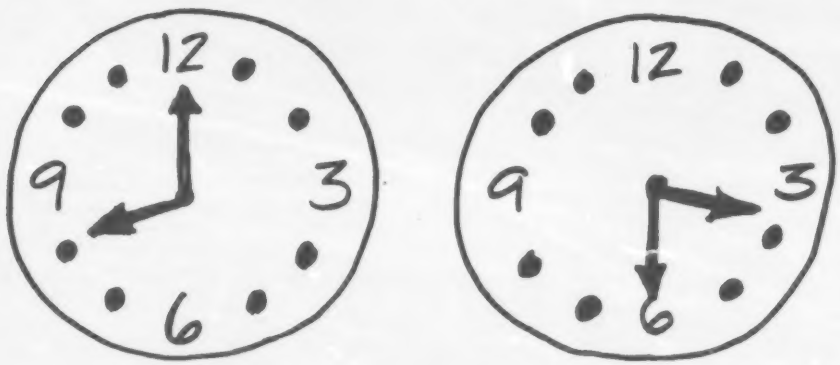


How much money do you earn?

Now, after 2 years, I earn $150 a week. Most beginning tellers earn $110-$135 per week. (That is $6,000-$7,000 a year.) Experienced tellers earn between $135-$180 per week ($7,000-$9,000 per year). Salary often depends on the teller's responsibilities. Those with more responsibilities usually earn more money.

What hours do you work?

I work from 8:00 a.m. to 3:30 p.m., Monday through Thursday. On Fridays I work from 8:00 a.m. to 7:00 p.m. Our bank is closed on Saturdays, Sundays, and holidays.



What is the employment outlook?

The employment outlook for bank tellers is expected to be strong during the next years. As banks offer more services to their customers, they will need to hire more tellers.

Some tellers tire of the routine work and seek other positions. This opens more jobs for beginning tellers.

Do you want to learn more about this job?

You can get more education:

- Take the following courses in high school.

  Mathematics:

  A teller needs to know mathematics. Most of the things a teller does requires mathematics.

  Typing:

  A teller does some typing. Typing skills are useful.

  Public Speaking:

  Tellers talk to many people each day. These courses will help you learn to speak well.

  Bookkeeping:

  Bookkeeping skills will help you understand a teller's job.

- Attend a business school.
- Attend college and study business and finance.
- Learn about other jobs related to bank tellers, such as . . .

  -billing machine operator
  -bookkeeper
  -cashier
  -bank loan officer

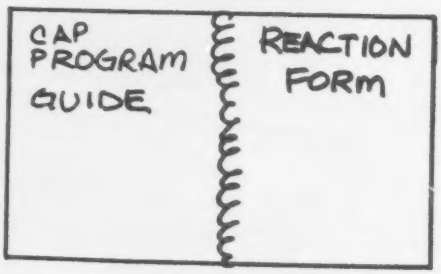
You can get some experience:

- Get a summer job at a bank. Any job at a bank will add to your experience.
- Get a part-time job as a cashier in a store. This will help you learn to work with money.
- Join business clubs in your school or community.
- Apply for a full-time job at a bank or savings and loan association.

71

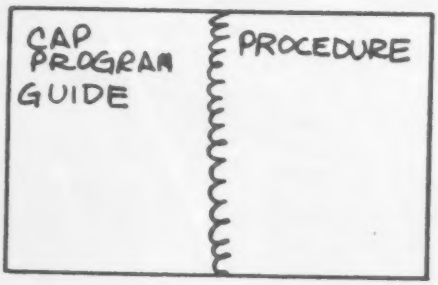
Now . . .

Turn to the Working with Numbers and Symbols Reaction Form in your Program Guide. Answer the questions on the back of the Bank Teller sheet.



What Next?

How many occupations have you investigated so far? Turn to the Procedure section of your Program Guide. Find the directions that apply to you.

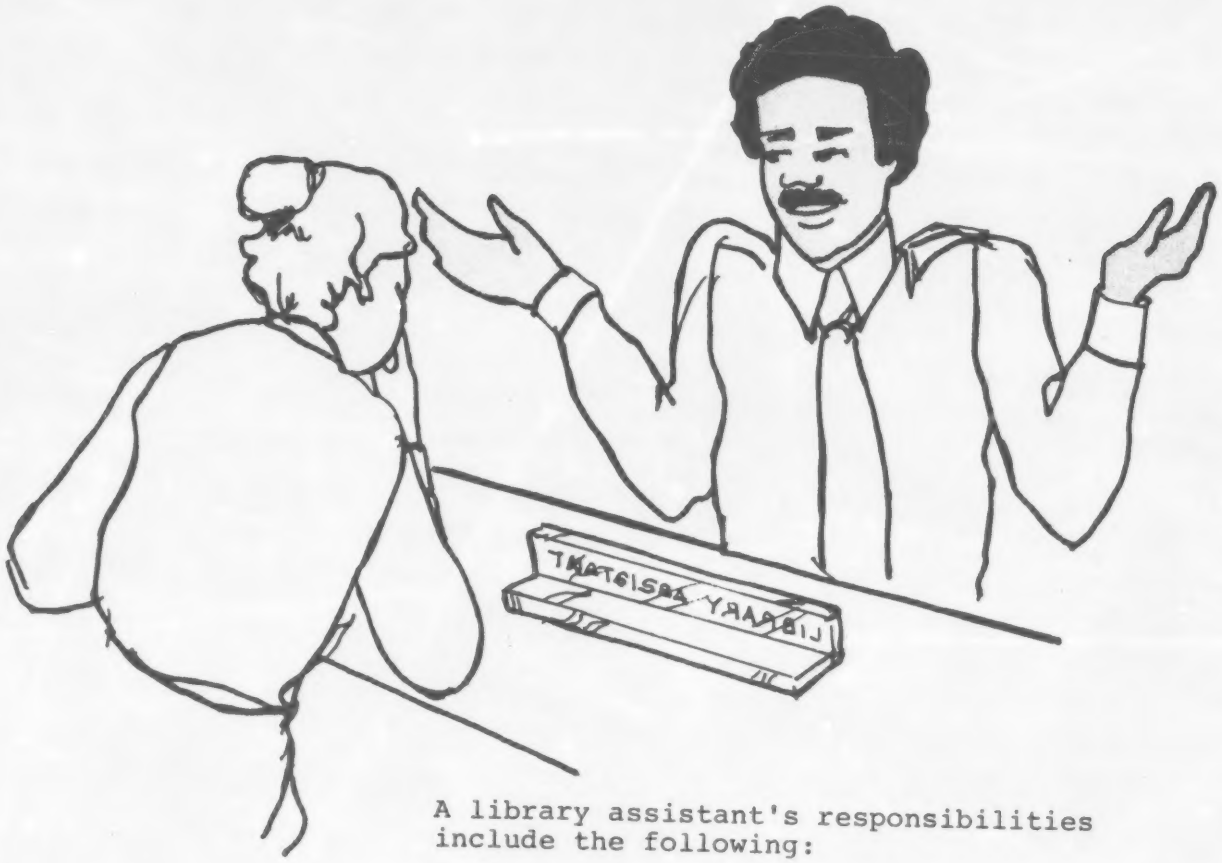


Enjoy the Career Alert Planning program!

Library Assistant

PERFORM 40

Library assistants do many jobs at a library. These jobs help librarians. These jobs also help people who use the library.



A library assistant's responsibilities include the following:

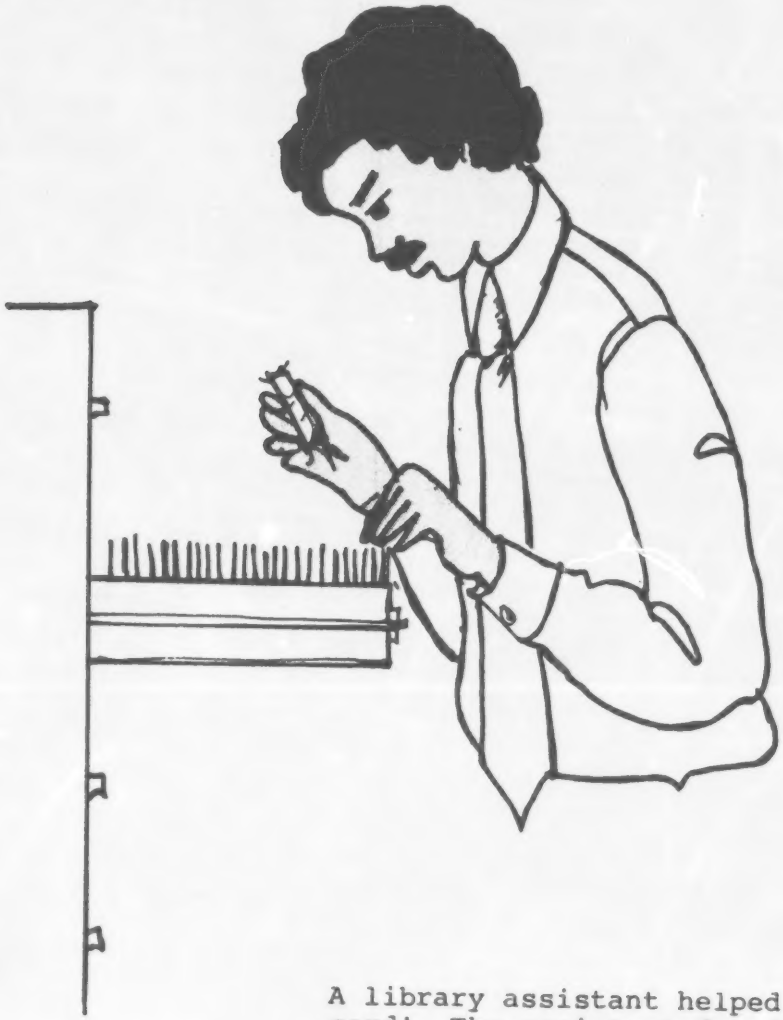
Responsibilities

1. Keep files on special materials.
2. Check books in and out.
3. Sort and shelve library materials.
4. Maintain the card catalog.
5. Repair damaged books.

You will learn something about maintaining the card catalog as you PERFORM the following activity.

Imagine that a man needs a book from the library. How does he find the book he needs?

First, he goes to the card catalog. He finds a card for the book. The card has a number on it. The number tells where the book is.



A library assistant helped write that card! The assistant found information about the book. Then a librarian used the information and added more information. Last, a clerk typed the card and put it into the card catalog.

74

Imagine . . . YOU are a library assistant.

You work at the Sheffield School Library.
Today your library received some new books.
You will help CATALOG the new books
(write cards for the books).

Your task is to help catalog new books for your library.

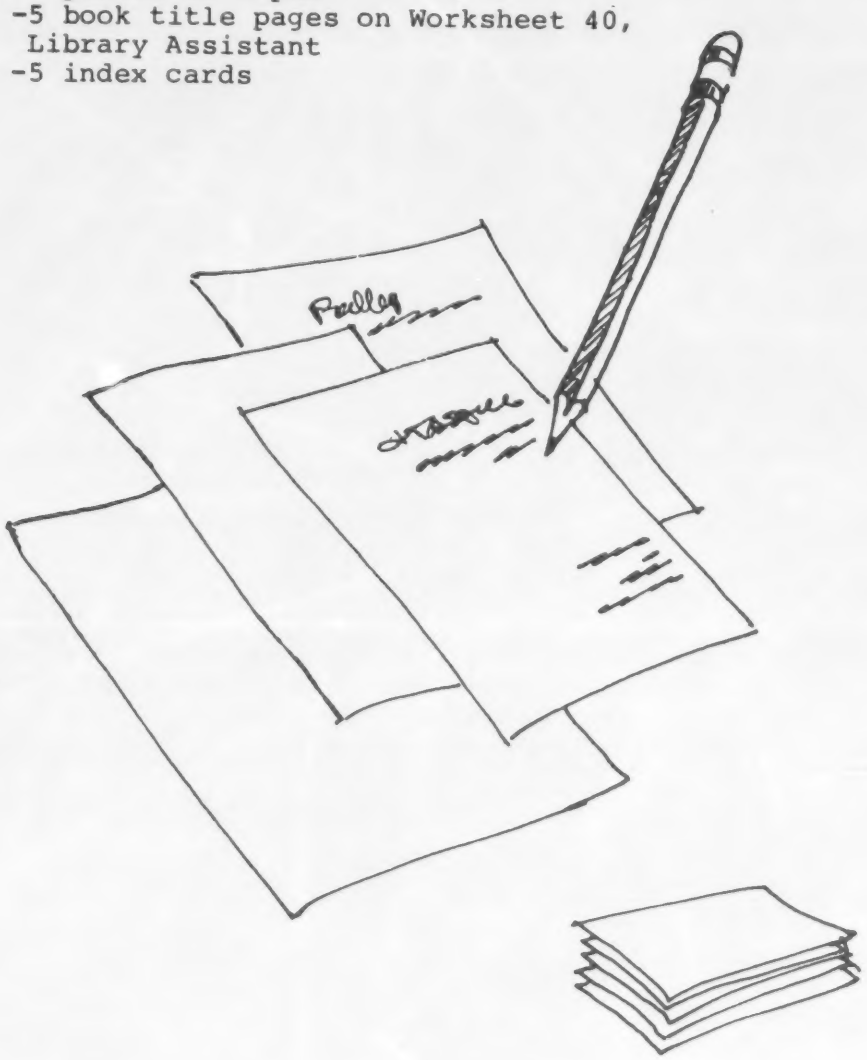
75

This is what you must do:

Record the title page information

STEP 1.

Get your materials, You will need . . .
- -a pencil or a pen
- -5 book title pages on Worksheet 40, Library Assistant
- -5 index cards

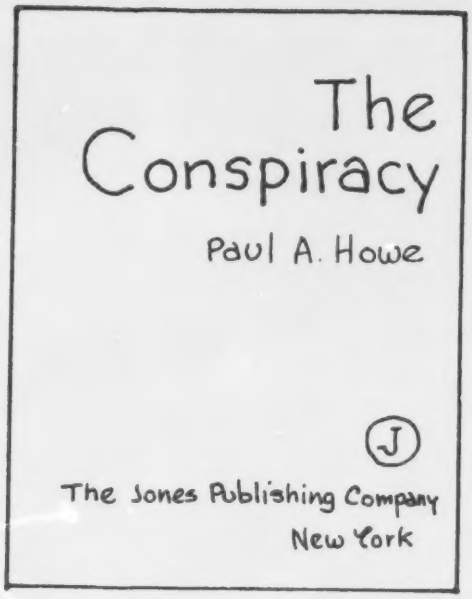


STEP 2.

Read the first title page.

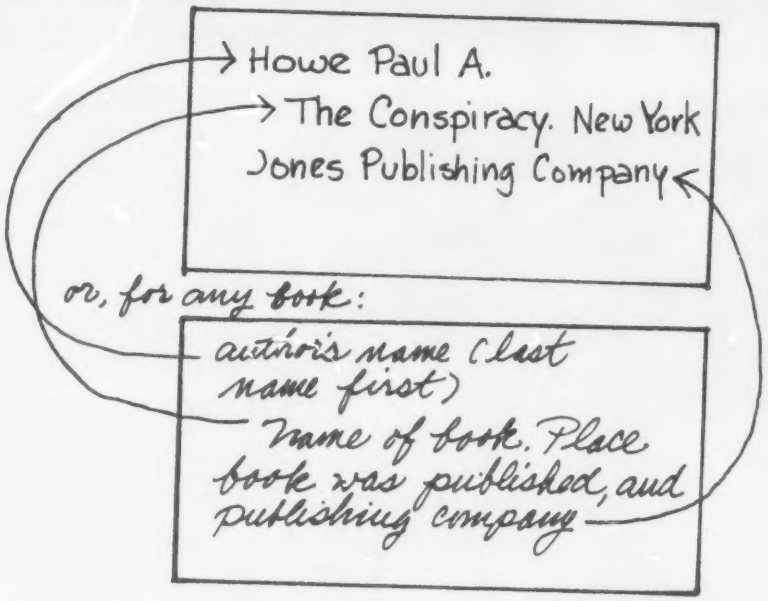
STEP 3.

Get an index card.



STEP 4.

Write on the card the information that is on the title page. Write it like this:

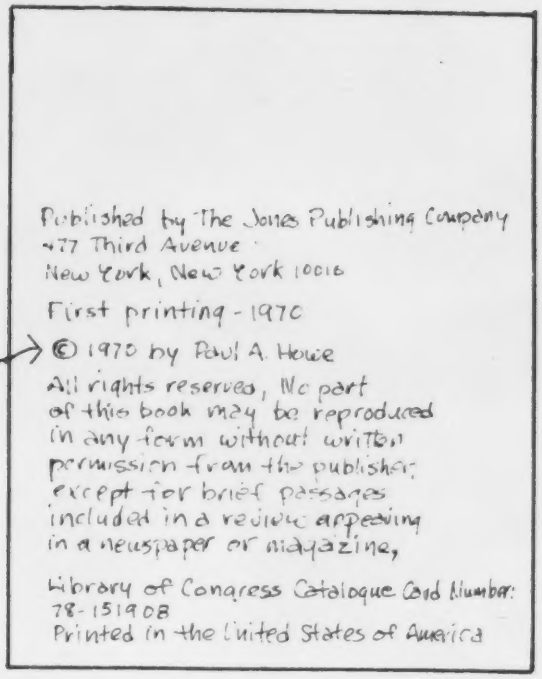

Howe Paul A.
The Conspiracy. New York
Jones Publishing Company
or, for any book:
author's name (last name first)
Name of book. Place book was published, and publishing company

77

Record the copyright date

STEP 1.

Look at the back of the title page. This page is the copyright page. (Copyright means that no one else can copy any part of the book.) The copyright page tells when the book was printed for the first time.


Published by The Jones Publishing Company
477 Third Avenue
New York, New York 10016
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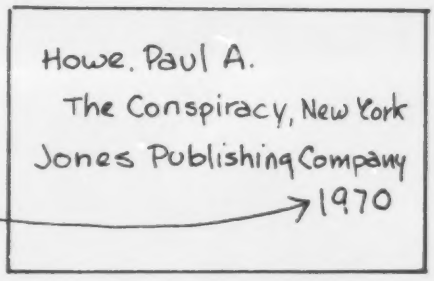
Library of Congress Catalogue Card Number: 78-151908
Printed in the United States of America

STEP 2.

Find the copyright date. A copyright date always has this symbol in front of it: ©.

STEP 3.

Write the copyright date on the card like this:



In a library you would give these cards to the librarian. The librarian would also add other information, such as . . .

- -the number of pages in the book,
- -whether the book has pictures,
- -a short description of the book, and
- -the catalog number of the book.

The card in the card catalog would show all these things. When people read the card, they will know some important facts about the book. These facts will help them decide if they want to read the book. They will also tell them where they can find the book in the library.

79

Now . . .

Turn to the Working with Numbers and Symbols Reaction Form in your Program Guide. Find the Library Assistant page. Record your feelings about your interests and abilities in this activity. Return to this page.

Did you like being a library assistant? Yes? Then you may want to try

Some other activities:

1. Go to your school library. See the way books and other materials are arranged. Notice how library workers try to help people in many ways.

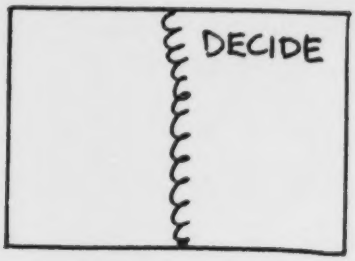
2. Look at cards in a card catalog. See how information is listed on each card. Use a card to help you find a book. Do you understand why all the information on the card is important?

3. Take the copyright pages from this activity to the library. Show a worker the information on the pages. Ask the worker to explain any information you do not understand.

81

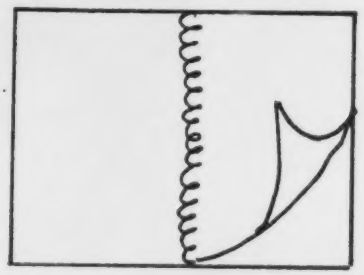
Would you like to find out more about this occupation?

yes ▶ Read DECIDE 40--Library Assistant

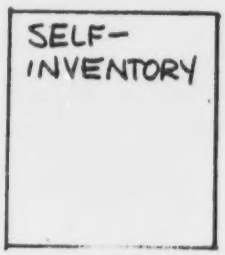


no ▶ Turn to another Working with Numbers and Symbols occupation:

Occupation 37--Medical Laboratory Assistant
Occupation 38--Computer Programmer
Occupation 39--Bank Teller

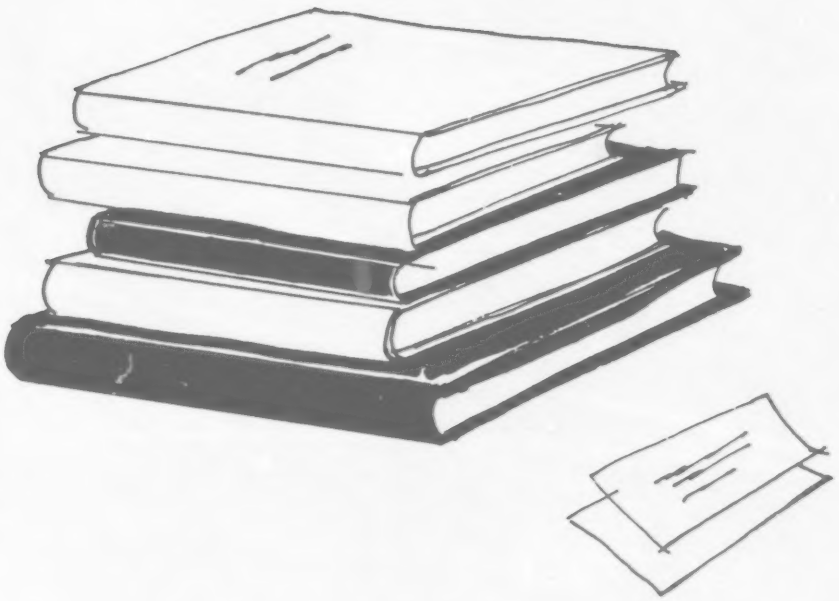


or ▶ Look at the Self-Inventory Chart in your CAP Program Guide. Select another job function to investigate.



Library Assistant

DECIDE 40



You finished one task a library assistant does. You helped catalog some books for your library.

Do you want to know more about this job? The next pages will tell you more. They will help you DECIDE about a career as a library assistant.

Talking with Pat Andres, Library Assistant at the Crest City Library . . .

I work at the Crest City Library. Our library is small. But we serve people from all parts of the county. We serve people in many ways. Serving people is our most important job.

We have many kinds of things in our library. We have books and magazines. We have pamphlets and newspapers. We have maps and records. We have films and filmstrips. We have microfilm, too! (MICROFILM is a tiny film that shows many pages of a newspaper or a book.)

My biggest job is helping to catalog books (put books in order). I spend many hours working with new books. I spend many hours listing the new books in the card catalog.

After people return books to the library, I put them back on the shelves. I look at the library numbers on the books and then put the books on the right shelves.

85

I also repair books if the pages are torn or the covers are loose. Sometimes I type letters to order new books. The librarian tells me which books to order.

I type other things for the library, too. I type schedules and reports. Sometimes I file pictures, letters, orders for books, and other things.

86

How did you prepare for your job?

During high school I worked at a library. I had a part-time job putting books on the shelves. I learned about the different kinds of jobs in a library.

After high school, I went to a junior college for two years. I studied library technology. I learned how to work in a library.

Some libraries hire assistants who did not go to junior college. These people learn their jobs as they work. But most libraries hire people with some special training.

Do all library assistants do the same things that you do?

Not quite. All libraries operate in their own special ways. The libraries usually describe our jobs to us. They need assistants to help them so they will have more time for other jobs.

There are many kinds of libraries. Our library is a city public library. There are also school, college, and special (like law or medical) libraries. Each kind of library is a little different from other kinds. But all libraries need library assistants.

How much money do you earn?

Library assistants' salaries depend on the size of the town or city and on the kind of library they work in. Beginning assistants often earn about $9,500 a year. With experience, some library assistants earn as much as $12,000 a year.

What hours do you work?

I work from 8:00 a.m. to 5:00 p.m. on Tuesday and Friday. I work from noon to 9:00 p.m. on Monday and Wednesday. I also work two Saturdays each month. I do not work Thursday and Sunday. I get a two-week vacation each year. Assistants who work in other libraries may work different hours.

89

What do you like most about your job?

I enjoy learning about the many books we have in the library. Every time I fill out a card for the card catalog, I learn something new. I have read many books since I started my job. The descriptions on the cards make them sound so interesting. They are usually as interesting as they sound.

I also enjoy learning the coding system for the books. It is amazing how easy it is to find a book when it has the right code number.

90

What do you like least?

Sometimes I do not like to work
Saturdays and evenings.

Some days I spend many hours putting
books on shelves. I stand and stoop.
I bend and stretch. I climb small
ladders to put the books where they
should be. Sometimes I get very tired!

91

What is the employment outlook?

The employment outlook for library assistants is good! Libraries are increasing their services. And, librarians have so many responsibilities that they must assign some of their duties to assistants. These are two reasons why library assistants will continue to find work.

While a college degree is not required, some college courses are helpful if one hopes to advance to other positions in the library. Library technician is one possibility. If this is a goal, consider taking some courses on the following topics. Many courses are given at community or junior colleges.

- -Library organization
- -Library procedures
- -Computerized library systems
- -The use and maintenance of audiovisual equipment

92

Do you want to learn more about this job?

You can get more education:

- Take the following courses in high school.

  English:

  Library assistants must read and write well.

  Typewriting:

  Typing skills are often needed to get into library technology programs.

- Learn about other jobs related to library assistant, such as . . .

  -library technician
  -teacher aide
  -title searcher
  -records custodian

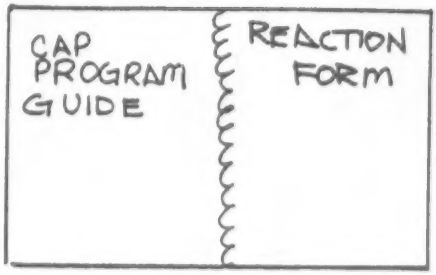
- Get information about library technology programs at junior colleges and community colleges. Enroll in some courses.

You can get some experience:

- Read stories to children you know.
- Get a part-time job in a library.
- Work in the school library.

Now . . .

Turn to the Working with Numbers and Symbols Reaction Form in your Program Guide. Answer the questions on the back of the Library Assistant sheet.



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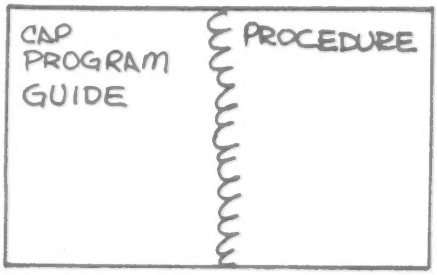

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